412 (*eché*), hoe (*asron*), machete (*machit*), coa (*huk*), and digging stick (*avutel*). In a 243 few towns (Amatenango), where lands are [409] flat, the plow is made of wood and pulled by oxen but only for wheat farming. During [415] corn planting, the seed is carried by the [824] planter in a *morral* hung from the shoulder, [237] in a gourd with a large spout, or in containers made of armadillo shells. The harvested crops are placed in deep baskets, made of reed-grass, or in big pita (*chojak*) [412] net bags. The ear of corn is cleared of its [237] husk by a sharp bone or a small deer horn.

322 412 The axe, machete, and knife are used in wood working, which is very rudimentary, though handsaw and hammer have a place. With these tools the Indians make doors, tables, seats, small benches, shelves. Blom [534] and LaFarge (1926–27, 2:351) add that the Tzeltal near Ocosingo also make violins of a shape similar to the European type, but they have no resonance and poor tone. They also manufacture pipes and combs roughly [463] finished. No village of this group has specialists in carpentry to compare with the Chamulas (Tzotzil-speaking), who supply furniture at low cost to San Cristobal de las Casas and other places of the area.

324 412 Stone carving requires a pickaxe with one end very sharp, the other very flat to serve as a hammer, and a short wooden handle. This is the tool used in Tenejapa for making metates. These metates have three legs, but Blom and LaFarge (1926–27, 2:338) mention metates without legs (Ocosingo municipio) which are made of volcanic stone found along the San Martin River. According to the Tzeltal of Oxchuc, the name of the metate is *chá*, its handle *kab-chá*.

412 An iron bar to break the ground, an axe, and a machete are the tools for building huts, chickencoops, sweat houses, and other small structures.

283 413 Another tool, used in the making of pita rope, is *karet*, which probably comes from the Spanish *carreta*. It consists of a wooden disc fixed to a tree trunk that is nailed to

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283 413 the ground. This disc has two hooks to which the fiber is knotted; when the disc is turned by a crank, it braids the fibers into rope. A thick board, smoothed by a metal knife (manufactured by the Indians from iron pieces bought in the city), is used to scrape the pita and remove the fiber.

407 [177] The most complex machine that the Tzeltal own and build is the wooden cane press, which was imported by the Spaniards to grind sugarcane (fig. 6). This machine is operated by two men, who move the rollers by a handle (*kabal-té*) at each end of the machine. The juice pressed out by the rollers drops into fluted containers made of pieces of banana tree, and finally into a pot. This juice is used in the preparation of an alcoholic beverage, *chicha* (*chi-ja*, 'sweet water'), and for panela. Chicha is prepared by fermenting this juice by bran, corn, or wheat, in a special container (*canoja*) made from a fluted tree trunk. The bran or other fermenting agent is *smé-chi-ja* ('mother of the chicha'). Some communities (Tenejapa, Cancuc, Oxchuc) have greater preference for this beverage than other Tzeltal groups.

[415] [415] [184] 293

224 411 [412] A gun has become very common in hunting. Sometimes (Oxchuc and Tenejapa) rabbits are taken by striking them with a coa, after cornering them with the aid of dogs. Blom and LaFarge (1926–27, 2:352) state that the Tzeltal of the lowlands usually hunt wild boar with long wooden spears with fire-hardened or metal points. Traps protect the milpa as well as snaring game.

41. Cooking utensils are mainly indigenous. The usual set consists of clay containers of varying size and shape, jicaras, baskets, wooden spoons, a comal, a metate, hooks, and wooden tripods for hanging items over the fire. In the last few years metal pots, dishes, frying pans, boiling pans, and especially handy *nixtamal* mills (which are gradually displacing the grinding stone) have been introduced. Other items that come from the city are flashlights, small kerosene lamps, watches, scissors, and (infrequently) battery radios.

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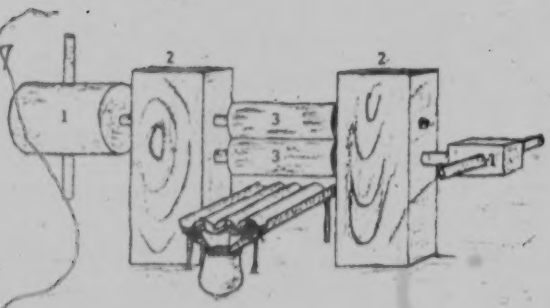

FIG. 6—SUGARCANE PRESS.
1, Kabal-té. 2, Smete-al. 3, S-kab.

their godchild nor protect him if he becomes orphaned, but this is only because closer members of the same lineage take care of him. But the padrinos must attend the wake (*kanka-almail*) and the burial when the godchild dies, as is expected from the godchild when the godparents die. In these communities, compadrazgo constitutes both an important religious obligation and a means of establishing friendship and cooperation between families.

POLITICAL AND RELIGIOUS ORGANIZATION

The political and religious patern is the same throughout all the Tzeltal communities, governed by two groups of authorities whose activities are interrelated. The first group, formed by members of the cabildo and ayuntamiento, manages political affairs of the community. The ayuntamiento maintains relationship between the local government and the national authorities. The presidente municipal and the intermediate authorities are popularly elected and then confirmed by the congress of the state. These authorities must represent both ethnic groups (Indians and Ladinos) to warrant the claim that "justice is equal for everybody." In 1936 the state government ruled that in all municipios where the indigenous population predominates, the presidente municipal should be an Indian.

Next in authority after the presidente is

7: Nash E-5 (1957-1967) 1970 NV9 Tzeltal NV9
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the roots of each plant so that it will be protected. One farmer commented on this process: "The face of the earth remains loose. Thus the corn remains of one heart. Nothing dies because the soil is moved, and the tender shoots begin to grow. When the second hoeing is finished, God looks at it to see that the corn matures." In the second hoeing, any corn which has grown between hillocks is pulled out so it will not deprive the main stalks of strength.

When the corn has matured, the stalks are doubled over to hasten the drying process. The mature cobs are left on the doubled-over stalks for about two weeks to ensure the maximum drying of the kernels before har-

TABLE 6. Schedule of Activities in Corn Production

Activity	*Month*	*No. of days necessary for task*	*Helpers*	*Tools*
Clear irrigation ditches	Oct.	6		Machete, forked stick
Fence fields	Nov.	4		Machete, ax
Cut stalks of last year's crop; burn leaves and weeds	Dec.	4		Machete, forked stick
Plow land 3 times	Jan.	3	Oxen	Plow
Clear irrigation ditches	Feb.	2		Machete, forked stick
Irrigate land and leave 6 days	Feb.	2		
Select seed and put in water, leaving overnight	Mar.	1	Wife	
Measure rows and distance between hills so there will be 5 handspans between each hillock; plant corn	Mar.	1		Digging stick, string, net bag
Irrigate planted corn	Mar.	1		
First hoeing	Apr.	4	2 or 3 men	Hoe
Second hoeing	May	3	2 or 3 men	Hoe
Fix irrigated ditches	June	1		Machete
Outside employment	July–Aug.			
Double over corn and leave 15 days	Sept.	4		
Pick corn; put in net bag and degrain cobs with few kernels; carry home harvest.	Oct.	5	Wife, horse	Net bags, sticks,

SOURCE: Information from a farmer possessing ½ hectare of irrigated land in center. He has no sons and one married daughter, whose husband works in sawmill.

7: Nash E-5 (1957-1967) 1970 NV9 Tzeltal NV9
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Wheat. In selecting the seed, the farmers choose those heads with the most kernels—there may be from thirty to eighty on each head. The same kind of seed must be used in planting each plot of land or the soil "does not give well." A new wheat seed was introduced by an American agronomist in the 1950s. The following reaction by an informant reveals why most of the farmers decided not to use it:

There is a quick-growing wheat, called foreign wheat because a foreigner brought it and planted it in the soil. Those who wanted to try it were given some. It was difficult to harvest because it was very dry and broke easily. Most of the grain was left behind on the ground. When it got to the threshing floor, most of it was broken. Therefore the town did not want it. So we continue planting the common wheat and it doesn't break.

The inefficient harvesting techniques force the people to consider loss of grains in deciding what wheat they will seed. However, a few of the farmers continue to grow the new wheat.

The scheduling of wheat production is shown in Table 8. The *arada* plow, introduced by the Spaniards (Foster 1951) and made locally by farmers for their own use, is commonly used to prepare the land. A few farmers borrow the plow of a relative, or sometimes a metal plowshare is bought in the departmental capital.

The harvest is the most arduous work in wheat production, but because it is done with the assistance of four or five helpers, usually brothers or compadres, it is a gay occasion. There are about a dozen threshing shelters which are individually owned and rented for 5 pesos a day. At the height of the harvesting season, the farmers have to wait for their turn to use the shelter. After the threshing, a fiesta is held in the house of the owner of the wheat at which liquor and a meal of beef stew is served. Since the labor involved is based on exchange rather than payment, the owner will take part in the harvest and celebration of those whom he has helped.

Beans. The choice of locale and the time of planting vary more radically for beans than for other crops because of the greater differences in type of seed. The two major types of beans are (1) ground beans, of

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which there is a black variety and a colored variety, and (2) climbing beans, of which there are four subclasses: "painted," white, yellow, and black. Beans must be grown only in irrigated lands of highest productiv-

TABLE 8. Schedule of Activities in Wheat Production

Activity	Winter wheat	Summer wheat	No. of days necessary for task: Winter wheat	Summer wheat	Helpers	Tools
Clear land	Dec. 7	May 12	5	2	2 paid workers	Machete, forked stick
Irrigate land; leave soaking	Dec. 7	May 15	1	1		
Plow	Dec. 15	May 23	1	2	Oxen team	Plow
Sow seed broadcast; cover, crossing over twice	Dec. 16	May 24	1	1	Oxen team	Plow
Cut wheat	May 1	Oct. 5	3	2	2 or 3 unpaid workers	Scythe
Thresh						
Carry wheat to shelter	May 3	Oct. 7				Net bags
Horses trample wheat	May 4	Oct. 8				
Shake stalks						Forked stick
Scoop grains into wooden box and sift to get rid of chaff	May 5	Oct. 9	3	3	4 or 5 unpaid workers, 5 horses	Box with wire mesh
Put grain in burlap bags; carry to houses on horseback						Burlap bags

[115] SOURCES: Information from two informants, one who grows winter wheat and the other who grows summer wheat, both cultivating ½ hectare of irrigated land.

ity. The land in the center, except for the fertilized corral areas, has lately yielded a very poor harvest. People say that the soul of the bean departed when they introduced the crop to their ejido plots in hot country. The scheduling of bean production is shown in Table 9.

[P.198-C]

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Plate 3. A father and his two sons, walking in order of age, leave the village to go to their milpa. The father, walking in front, is wearing the old-style costume with a wrapped overshirt concealing short undertrousers. His sons wear western clothing. All of the men carry net bags on a tumpline, with their backs protected from their burdens by a sheepskin. They all carry machetes, and the boys have rifles.

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Plate 4. Farmer showing the arada plow. He is holding the handle, and the shaft, made of a long tree post, is propped on the ground.